

CLAIMS

1. A method for producing a semi-conducting device comprising at least a layer doped with a doping agent and a layer of another type deposited on said doped layer in a single reaction chamber, wherein the deposition steps of said layers are separated by an operation for avoiding the contamination by the doping agent of said another layer.
2. The method of claim 1, wherein said operation comprises a dosing of the reaction chamber with a compound able to react with the doping agent.
3. The method of any of claims 1 and 2, wherein said operation comprises a dosing of the reaction chamber with a vapour or gas comprising water, methanol, isopropanol or another alcohol.
4. The method of any of claims 1 and 2, wherein said operation comprises a dosing of the reaction chamber with a vapour or gas comprising ammonia, hydrazine or volatile organic amines.
5. The method of any of claims 3 and 4, wherein said dosing is performed at around 0.05 to 100 mbar and between 100 and 350°C for less than 10 minutes.
6. The method of claims 1 to 5, wherein the doped layer is a p-doped layer.
7. The method of claims 1 to 5, wherein the doped layer is a n-doped layer.
8. The method of claim 6, wherein said operation is followed by the deposition of a buffer layer on the p-layer.
9. The method of any of claims 2 to 8, wherein said dosing is followed by a pumping at high vacuum and between 100 and 350°C for less than 5 minutes.

10. A semi-conducting device comprising at least a layer doped with a doping agent and a layer of another type deposited on said doped layer, wherein the interface between said layers contains traces of oxygen as a result of a treatment for avoiding the contamination of said another layer by the doping agent.
11. The semi-conducting device of claim 10, wherein the content of oxygen is higher than 10^{19} atoms.cm⁻³.
12. A semi-conducting device comprising at least a layer doped with a doping agent and a layer of another type deposited on said doped layer, wherein the interface between said layers contains traces of nitrogen as a result of a treatment for avoiding the contamination of said another layer by the doping agent.
13. The semi-conducting device of claim 12, wherein the content of nitrogen is higher than 10^{19} atoms.cm⁻³.